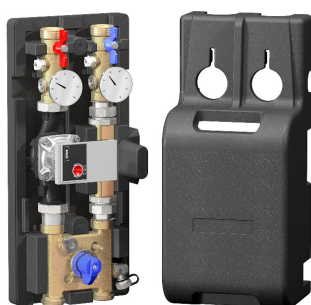


## Mixing kit for VARIMIX system, art. VAR 20/VAR 21/VAR 22/VAR 23



Distribution kits VAR 20, VAR 21, VAR 22 and VAR 23 can be used in systems requiring mixed water to be sent to the heating system. Regulation is done through a rotor 3-way (VAR 20/VAR 23) or 4-way (VAR 21/VAR 22) valve, each of which is available with either of two Kv values, that mixes hot water coming from the boiler with water coming back from the heating system. Mixing valve features a by-pass device allowing the adjustment of delivery temperature, which can be read on related thermometer. VAR 20, VAR 21, VAR 22 or VAR 23 kit must be completed by manifold module VAR 30, which allows its connection to the pressure equaliser and to possible other kits in parallel thanks to swivelling nipples. Equipped with individual insulation shell, they are available with or without electronic variable-speed pump.

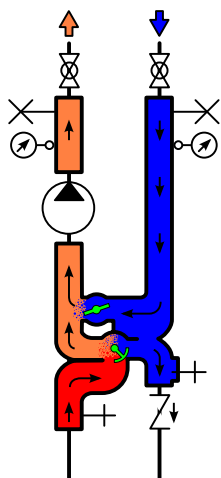
### ■ TECHNICAL FEATURES

Max operating temperature (except pump): 120 °C  
 Max operating pressure: 10 bar  
 Max flow rate: 3000 l/h  
 Thermometer range: 0 ÷ 120 °C

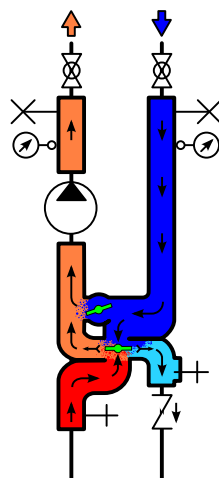
### ■ MATERIALS

Delivery and return branches: CW617N  
 Mixing valve: CB753S  
 Other brass components: CW617N  
 O-ring: peroxide EPDM  
 Elastic rings: stainless steel  
 Support: FeP13 EU 111 UNI 5867  
 Insulating shell: PS

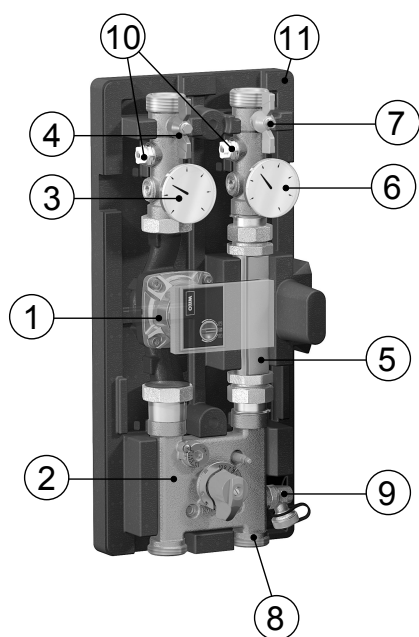
## ■ MAIN COMPONENTS



VAR 20/VAR 23 (3-way mixing valve)

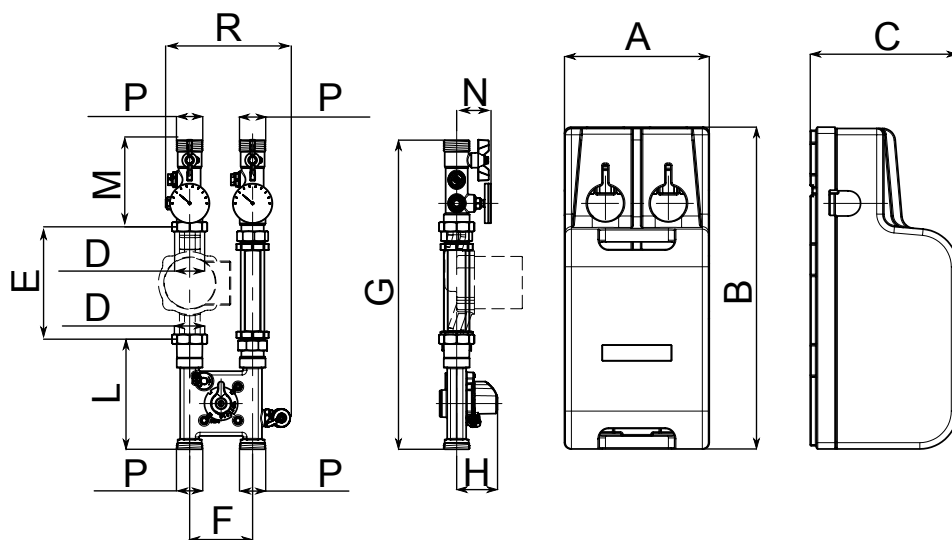


VAR 21/VAR 22 (4-way mixing valve)



1. Variable-speed booster pump (cod. 550620PE, 550621PE, 550622PE, 550623PE)
2. Mixing valve
  - 3-way, Kv 4 (VAR 20)
  - 4-way, Kv 4 (VAR 21)
  - 4-way, Kv 2 (VAR 22)
  - 3-way, Kv 8 (VAR 23)
3. Delivery thermometer
4. Delivery cut-off ball valve (red knob)
5. Return branch
6. Return thermometer
7. Return cut-off ball valve (blue knob)
8. Check valve
9. Fill/drain tap
10. Manual air vent valve
11. Insulating shell

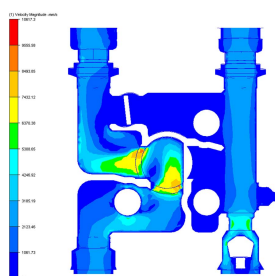
## DIMENSIONS



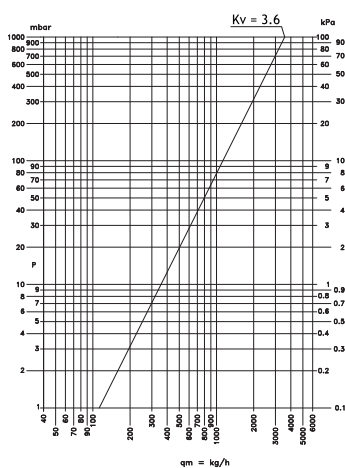
ART.	COD.	Pump	MIX	A	B	C	D	E	F	G	H	L	M	N	P	R
VAR 20	550620NB	■	3-way - Kv 4	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 20	550620PE	■	3 vie - Kv 4	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 21	550621NB	■	4-way - Kv 4	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 21	550621PE	■	4 vie - Kv 4	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 22	550622NB	■	4-way - Kv 2	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 22	550622PE	■	4 vie - Kv 2	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 23	550623NB	■	3-way - Kv 8	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200
VAR 23	550623PE	■	3 vie - Kv 8	230	510	232	1 1/2"	180	100	492	65	172	136	55	1 1/4"	200

## HYDRAULIC FEATURES

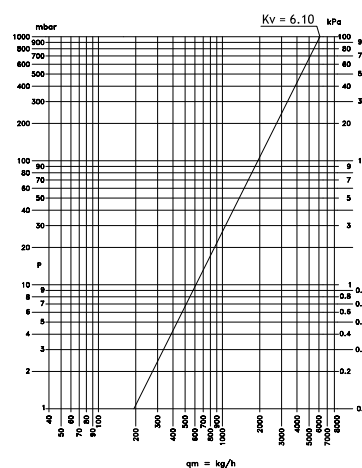
### Pressure drops in VAR 20 and VAR 23 kits



Flow through the valve

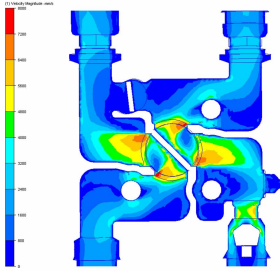


Kv kit VAR 20 (\*)

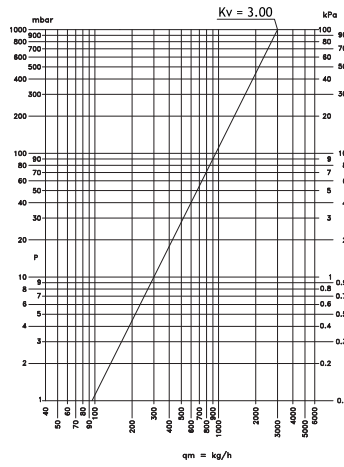


Kv kit VAR 23 (\*)

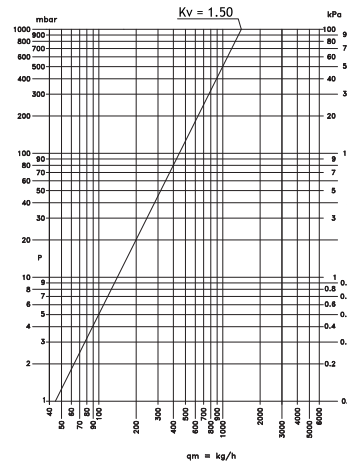
## Pressure drops in VAR 21 and VAR 22 kits



Flow through the valve



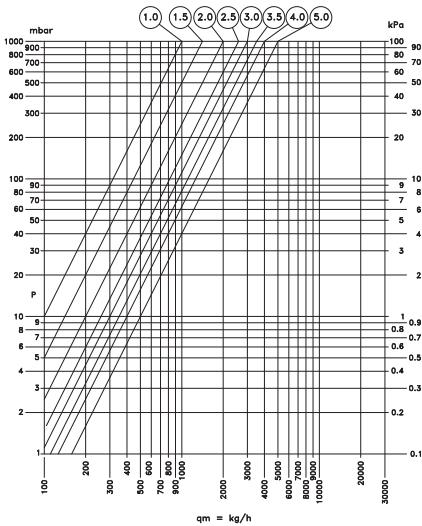
Kv kit VAR 21 (\*)



Kv kit VAR 22 (\*)

(\*) Kv value is referred to the system composed by mixing kit + modular manifold art. VAR 30.

## Secondary balancing by-pass



Kv	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0
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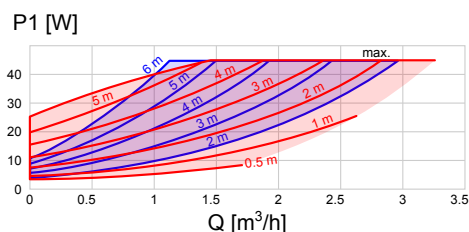
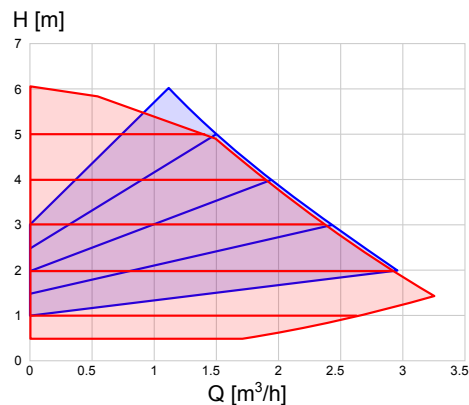
## CONSTRUCTION DETAILS

Variable-speed booster pump (in cod. 550620PE, 550621PE, 550622PE, 550623PE)



Operation modes:  $\Delta p$  constant,  $\Delta p$  variable, air-vent cycle  
 Supply: 230 V AC - 50 Hz  
 Consumption: 3-45 W  
 Protection degree: IPX4D  
 Temperature class: TF95  
 Operating pressure: PN6  
 Fluid temperature:  $-10 \div 110$  °C  
 Electrical connection: Molex connector  
 Port-to-port distance and connection thread: 180 mm, G 1 1/2"  
 Energy Efficiency Index EEI:  $\leq 0.20$

**Booster pumps on VARIMIX already comply with the energy efficiency requirements for 2015 demanded by ErP 2009/125/CE directive and the following regulations n. 641/2009 and n. 622/2012 (EEI<sub>max</sub> = 0.23).**



Modules equipped with standard three-speed pumps are still available upon request, **only for countries outside the European Union which do not adopt the ErP directive.**

## ACCESSORIES



VAR 30. Modular manifold for VARIMIX system.



AC 606-AC 606N.  
 Turning nipple 1 1/4" M × 1 1/4" M (yellow or nickel-plated surface).



AC 627-AC 627N.  
 Soft-seal reduced pipe union fitting 3/4" F - 1" F × 1 1/4" F (yellow or nickel-plated surface).



AC 632. Flow splitter fitting for distribution kit 1 1/4" F × 3/4" M.



M 106/230 - M 106Y/24  
- M 106/24. Servomotor  
for mixing valve.

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